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Kinetics of small disturbances in an isotropic universe I. Derivation of the equations for the disturbances

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Abstract

Gravitational disturbances in an isotropic cosmological model are considered within the bounds of relativistic kinetic theory. It is assumed that the collision frequency of the particles of the medium is much smaller than the frequency of the disturbances being studied. Equations are obtained for scalar, vector, and tensor disturbances in the case where the undisturbed solution describes a flat, isotropic cosmological model. © 1978 Plenum Publishing Corporation.

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